

Direct Testimony of Roberto Gasparini
Docket No. AQB 21-36

I. Introduction

My name is Roberto Gasparini and I am presenting technical testimony on behalf of ConocoPhillips Company (“COPC”) in support of the draft New Source Review (“NSR”) permit No. 7746-M8 (the “Draft Permit”). I am the Legal, Audit, & Enforcement Support Program Director at Spirit Environmental, LLC in Houston, Texas. I have considerable experience with air permitting and have supported more than 80 air permitting projects and modifications for facilities across the United States, including in New Mexico, Texas, and Colorado. I also have extensive experience with computerized air dispersion modeling in support of air permitting projects and have run over 4,000 models. I received both a Master of Science and Ph.D. in Atmospheric Sciences from Texas A&M University and a Bachelor of Science in Meteorology from Texas A&M University and have over 16 years of experience working on air permitting matters.

II. Background

COPC’s Zia Hills Central Facility (the “Zia Hills Facility”) is a central gathering facility located in Lea County, New Mexico. The Zia Hills Facility receives oil and gas from nearby wells and compresses and dehydrates natural gas before sending them to sales lines. Oil, gas, and water flow separately into the facility. Gas is dehydrated then reinjected for gas lift or compressed to the sales line. Oil is stabilized then temporarily stored in tanks before being sold via pipeline. Water is processed, then temporarily stored before being shipped offsite via pipeline. Engine emissions are controlled using engine catalysts and emissions from dehydrators are controlled by reboilers and condensers. The Zia Hills Facility also uses a vapor recovery unit (as well as a backup) and three flares to control emissions.

The Zia Hills Facility currently operates under the General Construction Permit – Oil & Gas (“General Construction Permit”) issued by the New Mexico Environment Department (the

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1 “Department”). Accordingly, the Zia Hills Facility’s operations are currently subject to the terms
2 and conditions of the General Construction Permit, along with other state and federal emissions
3 regulations, including 40 CFR Part 60 Subparts JJJJ and OOOOa. COPC has operated the Zia
4 Hills Facility pursuant to the General Construction Permit since 2018.

5 COPC intends to increase production from the Zia Hills Facility to 18,503 barrels of oil
6 per day and 120 million standard cubic feet per day. In accordance with 20.2.72 NMAC, COPC
7 applied for a minor source NSR permit from the Department to authorize the production increase
8 and the equipment necessary to support the increase. COPC submitted the complete permit
9 application, including extensive supporting documentation, to the Department on January 9, 2021
10 and provided supplemental materials later in January 2021 and March 2021 (collectively, the
11 “Permit Application”). The Department notified COPC that the Permit Application was
12 administratively complete on April 4, 2021. The Department then issued the Draft Permit.

13 **III. Support of Issuance of the Permit**

14 I have reviewed the Permit Application, the Department’s Statement of Basis in support of
15 the Draft Permit, COPC’s responses to questions from the Department in August and October
16 2021, and other materials posted publicly by the Department. Based on my review of these
17 documents and other materials identified in my testimony below, I believe that the Draft Permit
18 should be issued. I have also determined that there is no basis for denial of the Draft Permit.

19 **A. The Emissions Calculations are Accurate and Consistent with Accepted**
20 **Permitting Practices**

21 As part of my review of the Permit Application, I evaluated COPC’s emissions calculations
22 and calculation inputs. Section 6 of the Permit Application provides narrative descriptions of
23 emissions calculations, emissions summary tables, and detailed calculations for each emitting unit

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1 at the Zia Hills Facility. Section 7 of the Permit Application includes the supporting information
2 used to calculate the emissions in Section 6. Emissions estimates for each source of emissions
3 were calculated using AP-42 emissions factors, other generally accepted emissions factors, and
4 Promax models. These are industry standard emissions inputs that are commonly used in similar
5 permitting actions for this type of facility in New Mexico and across the country.

6 Based on my analysis, COPC's calculations are consistent with accepted industry practice
7 and provide an accurate representation of the potential emissions from the Zia Hills Facility from
8 all emissions sources included in the Permit Application.

9 **B. The Modeling Approach is Accurate and Consistent with Accepted**
10 **Permitting Practices**

11 I also evaluated the modeling files used by COPC in support of the Permit Application.
12 Based on my extensive experience with modeling, both in New Mexico and other states, COPC's
13 air modeling results are accurate and consistent with accepted permitting practices.

14 COPC used an AERMOD model to evaluate potential air impacts from the Zia Hills
15 Facility. AERMOD was developed by the American Meteorological Society/Environmental
16 Protection Agency Regulatory Model Improvement Committee. EPA has approved AERMOD
17 for use in air permitting. More importantly, the Department, via its Air Dispersion Modeling
18 Guidelines (last revised October 26, 2020) ("Modeling Guidelines"), has established that
19 AERMOD "is intended to be the standard regulatory model."

20 I understand that WildEarth Guardians ("WEG") raised concerns with the modeling inputs
21 used in COPC's analysis. However, all of COPC's modeling inputs are consistent with the
22 requirements in the Modeling Guidelines. Among other things, COPC correctly modeled impacts
23 and used data from the appropriate air quality monitors for background concentrations. In addition,

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1 the modeling inputs and results are reasonable and consistent with what I would expect given my
2 experience. Based on my review, there are no deficiencies in COPC's modeling approach or
3 results.

4 **C. The Permit Application Meets all Requirements for Issuance**

5 The Department's regulations at 20.2.72.203 NMAC establish the requirements for
6 issuance of a permit. Based on my review of the Department's requirements and the Permit
7 Application, the Permit Application meets all applicable requirements. The Permit Application
8 was submitted using the Department's Universal Application Form and divides the information
9 into 23 different sections. Each of the 23 sections in COPC's Permit Application contains the
10 information required by the Universal Application Form and supports issuance of the Draft Permit.

11 Among other requirements, COPC's Permit Application includes emissions calculations
12 and inputs in Sections 6 and 7 and a regulatory compliance discussion demonstrating compliance
13 with each applicable state and federal air quality regulation in Section 13. In addition, Section 16
14 provides information concerning the air modeling completed for the Zia Hills Facility and notes
15 that "the modeling results indicate that the impacts surrounding the facility are in compliance with
16 the ambient air quality standards and the facility will not cause or contribute to an exceedance of
17 the standards." The Department's Air Dispersion Modeling Summary ("Modeling Summary")
18 and the Department's Statement of Basis similarly conclude that "[t]his modeling analysis
19 demonstrates that operation of the facility described in this report neither causes nor contributes to
20 any exceedances of applicable air quality standards. The standards relevant at this facility are
21 NAAQS for CO, NO₂, PM_{2.5}, PM₁₀ and SO₂; NMAAQs for CO, NO₂, and SO₂; and Class I
22 and Class II PSD increments for NO₂, PM_{2.5}, PM₁₀, and SO₂." I agree with this assessment
23 based on my review of the Permit Application and the modeling materials.

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D. There is No Basis for Denial of the Permit

Having established that the Permit Application meets all applicable application requirements, I also evaluated the applicability of the eight bases for permit denial in 20.2.72.208 NMAC. As summarized below, none of the bases for denial apply:

1. The Zia Hills Facility will meet applicable regulations adopted pursuant to the New Mexico Air Quality Control Act.

2. The Zia Hills Facility will not emit a hazardous air pollutant or an air contaminant in excess of any applicable New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants or a regulation of the board.

3. The Zia Hills Facility is exempt from toxic air permitting requirements because it is an oil and gas production facility, as defined in 20.2.72.401 NMAC. In addition, based on my experience, toxic air pollutants are not expected to be emitted in significant quantities from this type of operation.

4. The Zia Hills Facility will not cause or contribute to air contaminant levels in excess of the National Ambient Air Quality Standard (“NAAQS”) or New Mexico ambient air quality standard.

5. The Zia Hills Facility will not cause or contribute to ambient concentrations in excess of a prevention of significant deterioration (“PSD”) increment.

6. No provision of the New Mexico Air Quality Control Act will be violated.

7. There is no indication that any construction will not be completed within a reasonable time.

8. COPC did not request an accelerated review, so there is no potential conflict of interest in accelerated review.

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IV. Support of the Draft Permit

A. The Draft Permit Contains All Typical and Appropriate Conditions

I have also reviewed the Department's Draft Permit. The Draft Permit contains terms and conditions typical of a minor source NSR permit. It establishes reasonable and effective emissions limits, covers all point sources of emissions at the Zia Hills Facility, and establishes detailed monitoring, recordkeeping, and reporting obligations. I am confident that if the Zia Hills Facility is operated in compliance with the terms and conditions of the Draft Permit, it will comply with all applicable air regulations and will not cause or contribute to any exceedance of applicable air quality standards, including NAAQS and PSD increments.

V. Response to WEG Comments

I understand that WEG submitted two separate comment letters to the Department on March 12, 2021 and July 16, 2021 that raised concerns with the Permit Application and Draft Permit. I have reviewed WEG's letters and analyzed each issue they raised. In summary, WEG's concerns relate to: [REDACTED] the use of significant impact levels in determining source impacts; compliance with Executive Order 2005-056; compliance with toxic air pollutant permitting requirements; coverage of all point sources and potential adjacent sources; the enforceability of emissions limits, including limits on startup, shutdown, and malfunction ("SSM"); alleged issues with COPC's modeling; and other "miscellaneous issues." None of WEG's concerns have any merit.

I have also reviewed COPC's responses to both WEG letters included as COPC Exhibit 3 and COPC Exhibit 4. I agree with and support COPC's responses and hereby incorporate each of COPC's responses by reference in my testimony. Because I am incorporating COPC's responses

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by reference, I will not restate every issue in detail. However, I have identified three specific topics for additional emphasis below that relate to particularly inaccurate concerns from WEG.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

B. Modeling and Impacts

WEG raised several concerns related to whether COPC performed appropriate modeling and included the correct inputs in its modeling. None of these concerns are warranted. COPC conducted modeling in accordance with the Department's Modeling Guidelines, using the appropriate procedures, methods for calculating background concentrations, and data from representative air quality monitors listed in the Modeling Guidelines. As I noted above, I evaluated the modeling files used by COPC in support of the Permit Application. Based on my extensive experience with modeling, both in New Mexico and other states, COPC's air modeling results are accurate and consistent with accepted permitting practices.

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C. Permit Limits

WEG argues that because the Draft Permit does not include a frequency or duration limit on hourly SSM emissions, it authorizes emissions beyond the yearly limits set forth at Condition A107 of the Draft Permit. As a result, WEG asserts that the Zia Hills Facility is not constrained by its annual emissions limits and NSR major source permitting requirements are triggered. WEG's position is contrary to long-established permitting principles and is inconsistent with all my experience in air permitting and compliance consulting at the state and federal level. Emissions sources are typically permitted with both hourly and annual limits. If a source exceeds the hourly limits, it is subject to enforcement by the applicable regulatory authority. Similarly, if the source exceeds annual emissions limits, it is subject to enforcement, regardless of its compliance with hourly limits. The Zia Hills Facility's emissions are necessarily constrained by annual emission limits. This is an uncontroversial position that is consistently applied and understood by permitting authorities and industry professionals.

VI. Conclusion

The Permit Application for the Zia Hills Facility contained all information necessary for permit issuance pursuant to the Department's regulations and there is no basis for denial of the Permit Application or the Draft Permit. If the Draft Permit is issued and the Zia Hills Facility operates pursuant to the terms of the Draft Permit, it will be in compliance with all applicable air regulations. Although WEG has raised several issues with the Permit Application and Draft Permit, none have merit. The Department should issue a final permit for the Zia Hills Facility.